interberg

OPzV

Tubular Plate
VRLA
Batteries

catalogue

ed 04/20180319

atlantic power group

TÜV INTERCERT
ISO 9001:08 -- ISO 14001:04
OHSAS 18001:07
Certificate No.: 09-QEO-01427-TIC

interberg batteries

Interberg Batteries works hard to become one of the most respected and leading companies within the world's battery business, always looking for the latest advanced technical know-how, the most sophisticated production machinery and the most modern laboratory equipment. Interberg Batteries has got ISO 9001:2008, ISO 14001:2004 as well as OHSAS 18001:2007 certifications.

Interberg Batteries is one well known provider of stored energy solutions for virtually any imaginable application, thanks to the widest spectrum of battery technologies and ranges it offers to the market:

NICKEL-CADMIUM BATTERIES:

- KPH, KPL, KPM Pocket Plate Battery Cells
- KPX Sintered Plate Battery Cells
- KGL, KGM Valve Regulated Battery Cells
- SNC Solar Energy Battery Cells
- NCA Alkaline Aircraft Batteries

NICKEL-IRON BATTERIES:

- SNF Renewable Energy Battery Cells

STATIONARY LEAD-ACID BATTERIES:

- VRLA-AGM Flate Plate Cells and Blocks
- VRLA-GEL Flat Plate Cells and Blocks
- OPzS Tubular Plate Vented Battery Cells and Blocks
- OPzV Tubular Plate Valve Regulated Battery Cells and Blocks
- GRoE Planté Vented Battery Cells

MOTIVE POWER BATTERIES

- LiFePO4 Lithium Batteries for Stand-by and Electrical Vehicles
- PzS, PzB Traction lead-acid batteries for Forklift Trucks

SILICON BATTERIES

- SEV Silicon Batteries for Electrical Vehicles
- STB Silicon Batteries for Telecom and Stationary Applications
- SHE Silicon High Energy Batteries for Solar Installations

Interberg also supplies other excellent complementary products:

CHARGERS/RECTIFIERS, UPS, OFF-GRID SOLAR POWER GENERATION SETS AND OFF-GRID SOLAR STREET LIGHTING

interberg batteries
mirador de despeñaperros 17
28400 collado villalba (madrid)
Spain

atlantic power group

tel : 34-916263872
fax : 34-916263870
website : www.interberg.com
e-mail : info@interberg.com

interberg batteries

Compliant Standards

Interberg OPzV Batteries meet or exceed the performance parameters and requirement of german Standard DIN-40742 and IEC-EN-60896-2.

Product Characteristics

- The electrolyte contains fumed silica, so there is no flow, no leakage or gradation of sulfuric acid. Interberg OPzV cells can be installed either horizontally or vertically. There is no risk of leakage during the utilization or transportation of the batteries.
- Thanks to the gel electrolyte, which fills all the space inside the cell, under circumstances of high temperature and/overcharge, the battery will not dry out. The gelified electrolyte has a large heat capacity and a good radiation performance. Thermal runaway is practically excluded.
- The positive electrodes are tubular plates, which effectively prevent the active materials from falling off. The skeleton of the positive plate is made of a die cast PbCa alloy and the thin and compact crystal grains of alloy ensure a corrosion proof excellent performance.
- The positive plates are pasted in a radial structure grid, what improves the utilization rate of active materials and also the discharge performance at large currents. PbCa alloy is also used for the negative plates and the unique paste formula enables a perfect recovery performance and a highly effective battery recharging after deep discharge. So, the Interberg OPzV batteries offer a more than optimal cycling and life time response.
- High porosity and low resistance PVC-SiO_2 separators are used.
- A constant pressure safety valve prevents case swelling and electrolyte dry out.
- A total no-leakage is ensured by the resin sealing of case and lid (both made of UL94-HB ABS plastic). UL94-V0 containers are optional.
- The cell terminals are of a compounding type fitted with an inlaid copper core insert. It is processed through die cast and the terminals are sealed by means of a special sealing resin and the sophisticated manufacturing equipment.

Environmental Aspects

* Maximum operation altitude	: shall not exceed 4000 m
* Operation Temperature Range	: between -20ºC and +50ºC
* Best Operation Temperature Range	: between +20ºC and +30ºC
* Relative Humidity	: ≤ 90 %

The battery shall be kept away from fire and organic solvents and shall be protected from direct sunshine. Battery cells of a same group shall be used at the same environmental temperature.

* Floating Charge Voltage	: 2.25 V/cell/25ºC
* Float Charge Life Expectancy	: 18 – 20 years at 25ºC
* Self Discharge	: less than 40% of rated capacity after 2 years/25ºC
* Deep Discharge Recovery	: within 12 hours, 95% capacity can be restored
* Gas recombination efficiency	: exceeds 99 %

interberg batteries
mirador de despeñaperros 17
28400 collado villalba (madrid)
Spain

atlantic power group

tel : 34-916263872
fax : 34-916263870
website : www.interberg.com
e-mail : info@interberg.com

interberg batteries

OPzS Cell Types and Specifications

Cell Type	V	Capacity (Ah/10h)	Cell Length (mm)	Cell Width (mm)	Cell Height (mm)	Total Height (mm)	Cell Weight (Kg)	Terminal Type
3-OPzV-150	2	150	103	206	353	365	15.0	M10
4-OPzV-200	2	200	103	206	354	384	18.5	M10
5-OPzV-250	2	250	124	206	354	384	23.0	M10
6-OPzV-300	2	300	145	206	354	384	27.0	M10
5-OPzV-350	2	350	124	206	470	500	29.0	M10
6-OPzV-420	2	420	145	206	470	500	34.5	M10
7-OPzV-490	2	490	166	206	470	500	39.5	M10
6-OPzV-600	2	600	145	206	645	675	48.0	M10
8-OPzV-800	2	800	191	210	645	675	64.5	M10
10-OPzV-1000	2	1000	233	210	645	675	80.0	M10
12-OPzV-1200	2	1200	275	210	645	675	94.0	M10
12-OPzV-1500	2	1500	275	210	795	827	115.0	M10
16-OPzV-2000	2	2000	399	212	772	809	156.0	M10
20-OPzV-2500	2	2500	487	212	772	809	194.0	M10
24-OPzV-3000	2	3000	576	212	772	809	230.0	M10

interberg batteries
mirador de despeñaperros 17
28400 collado villalba (madrid)
Spain

atlantic power group

tel : 34-916263872
fax : 34-916263870
website : www.interberg.com
e-mail : info@interberg.com

interberg batteries

Nominal Electrical Discharge Parameters
(Discharge Currents to the nominal Cut-Off Voltage of 1.80V/Cell)

Cell Types	15 min	30 min	1 h	2h	3h	4h	5h	6h	8h	10h
3-OPzV-150	151	115	76.5	47.7	37.5	29.6	25.12	21.6	17.6	15.0
4-OPzV-200	201	153	102	63.6	50.0	39.5	33.5	28.8	23.5	20.0
5-OPzV-250	252	192	127	79.5	62.5	49.0	41.5	36.0	29.0	25.0
6-OPzV-300	302	230	153	95.5	75.0	58.8	49.8	43.5	34.8	30.0
7.OPzV-350	320	265	185	117	87.5	72.0	61.5	53.5	43.0	36.5
6-OPzV-420	384	318	222	140	105	85.8	73.8	64.2	51.6	42.5
7-OPzV-490	448	371	259	163	122	100	86.5	74.9	60.5	50.0
6-OPzV-600	492	420	312	199	150	122	103	90.0	72.0	60.0
8-OPzV-800	656	560	416	265	200	163	138	120	96.0	80.0
10-OPzV-1000	820	700	520	332	250	204	173	150	120	100
12-OPzV-1200	984	840	624	398	300	244	207	180	144	120
12-OPzV-1500	1008	924	738	506	390	313	263	226	180	150
16-OPzV-2000	1344	1232	984	67	520	418	350	302	238	200
20-OPzV-2500	1680	1540	1230	844	625	522	438	378	298	250
24-OPzV-3000	2016	1848	1476	1012	780.0	626.5	525.5	453.6	357.6	300.0

Long Discharge Performance

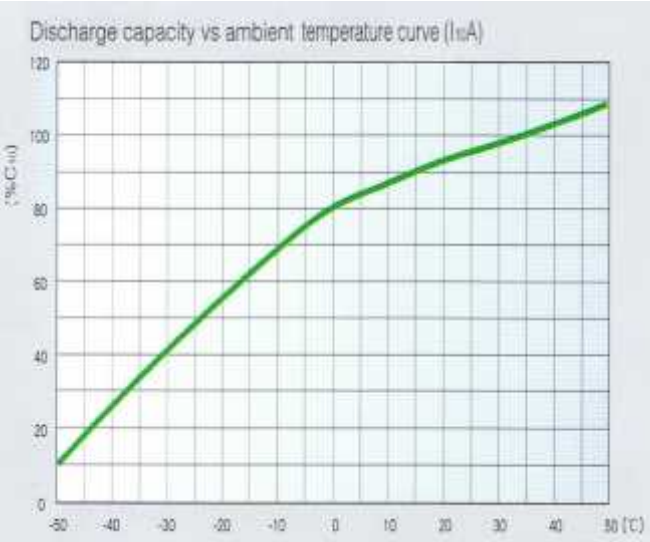
Cell Types	Ah/24h	Ah/48h	Ah/120h	Ah/240h
3-OPzV-150	169	187	196	199
4-OPzV-200	225	250	262	266
5-OPzV-250	281	312	328	334
6-OPzV-300	337	375	392	399
7-OPzV-350	393	437	457	465
6-OPzV-420	472	525	550	559
7-OPzV-490	552	613	642	653
6-OPzV-600	674	750	785	799
8-OPzV-800	890	1000	1037	1055
10-OPzV-1000	1113	1250	1296	1318
12-OPzV-1200	1333	1500	1556	1582
12-OPzV-1500	1639	1830	1908	1941
16-OPzV-2000	2185	2440	2545	2588
20-OPzV-2500	2732	3050	3181	3235
24-OPzV-3000	3279	3660	3817	3882

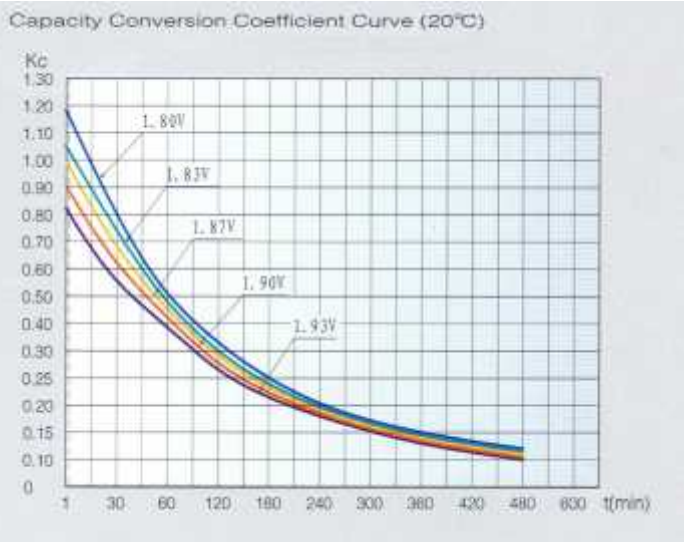
interberg batteries
mirador de despeñaperros 17
28400 collado villalba (madrid)
Spain

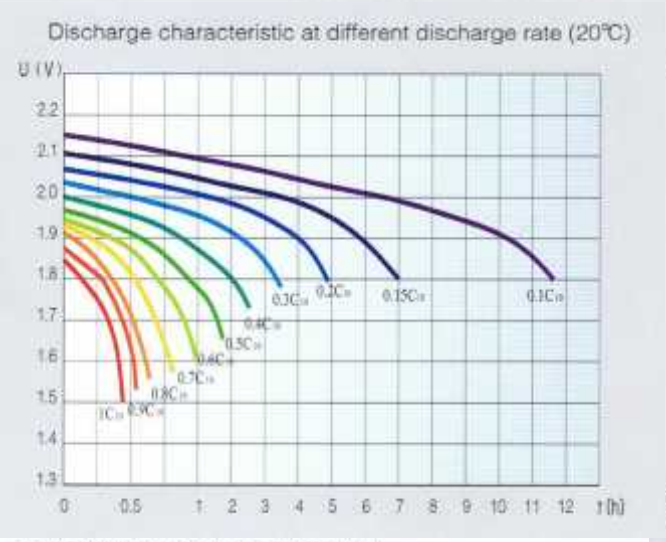
atlantic power group

tel : 34-916263872
fax : 34-916263870
website : www.interberg.com
e-mail : info@interberg.com

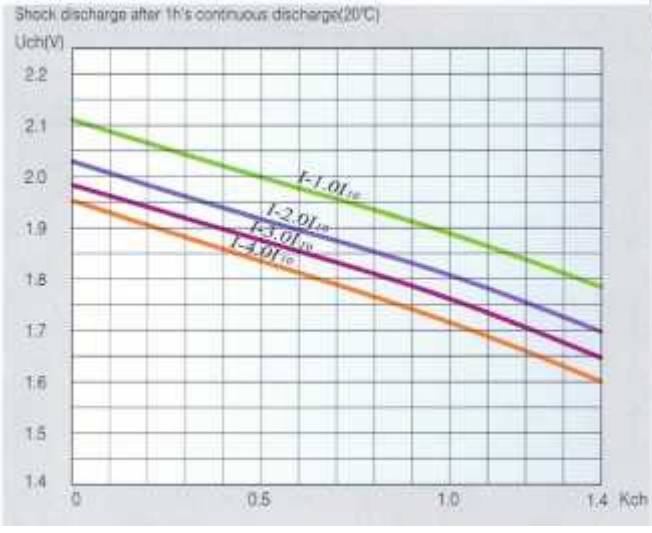
interberg batteries

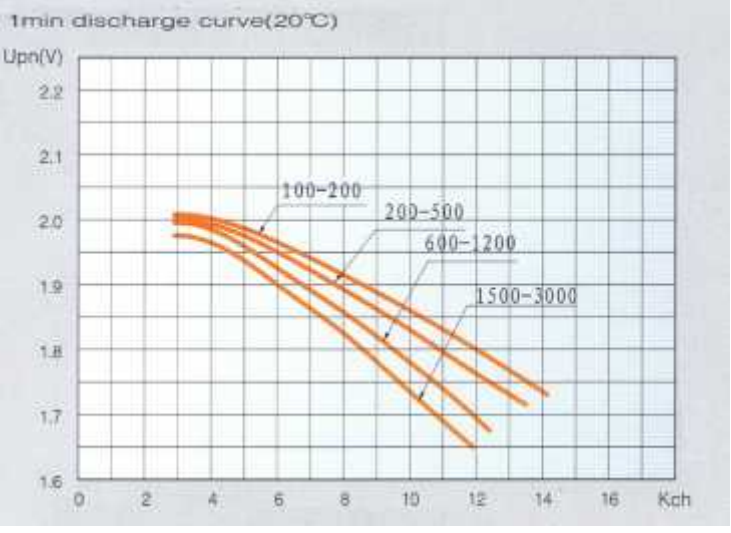






Floating charge–shock discharge at floating charge
Dotted line–shock discharge at once after cutting the charge
0 (open circuit) –fully charged, then after 15h's, shock discharge



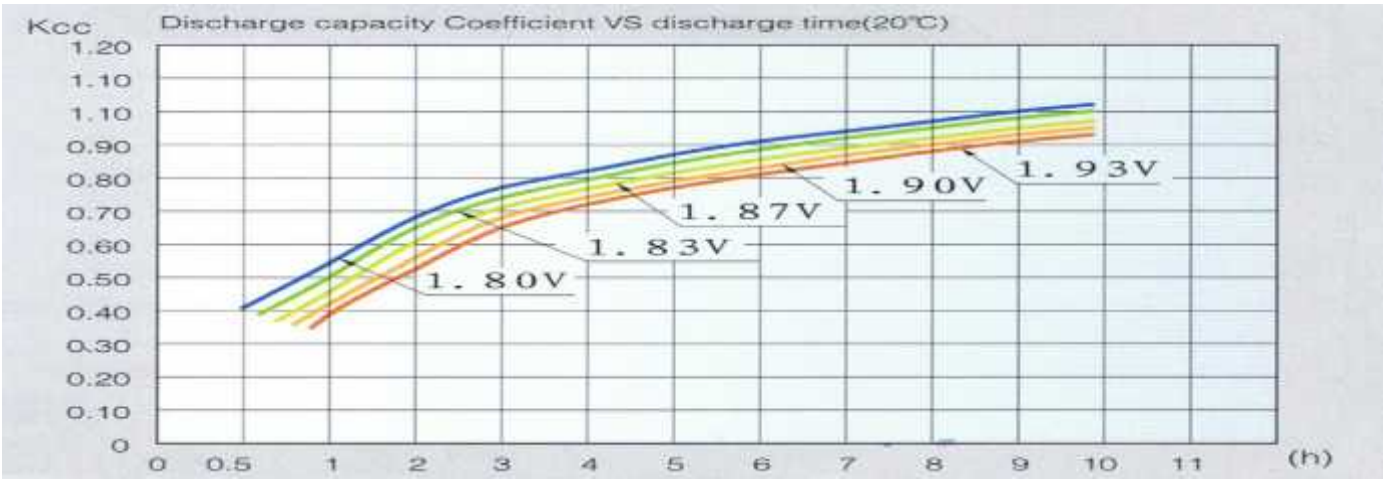


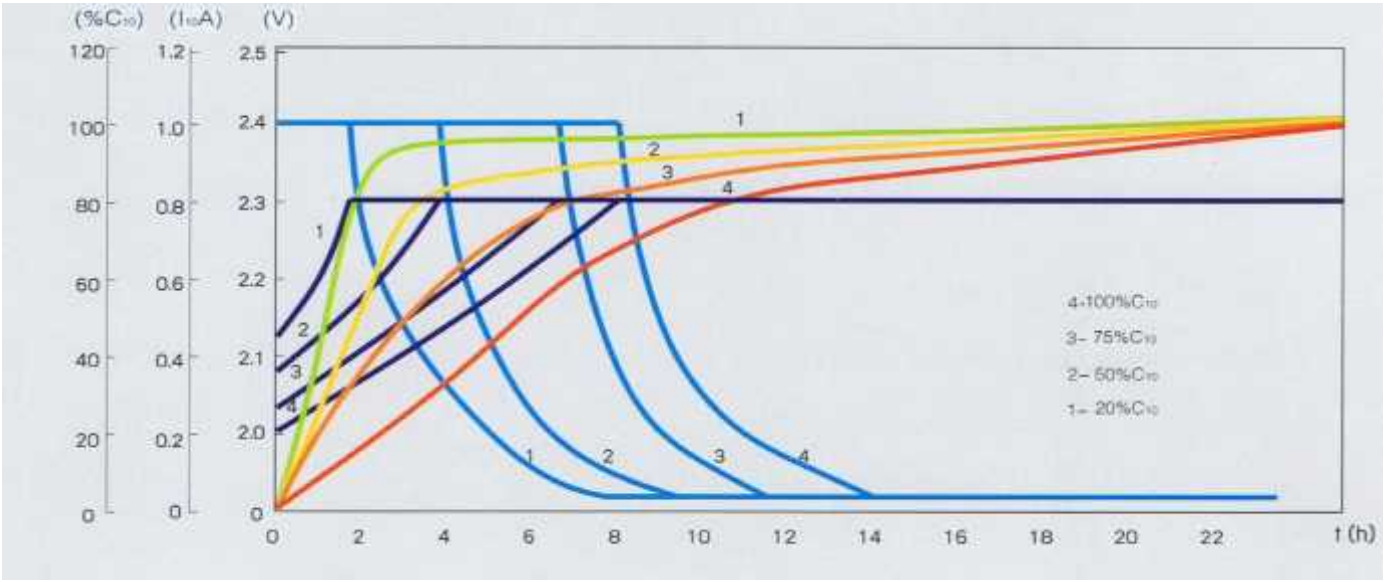
interberg batteries
mirador de despeñaperros 17
28400 collado villalba (madrid)
Spain

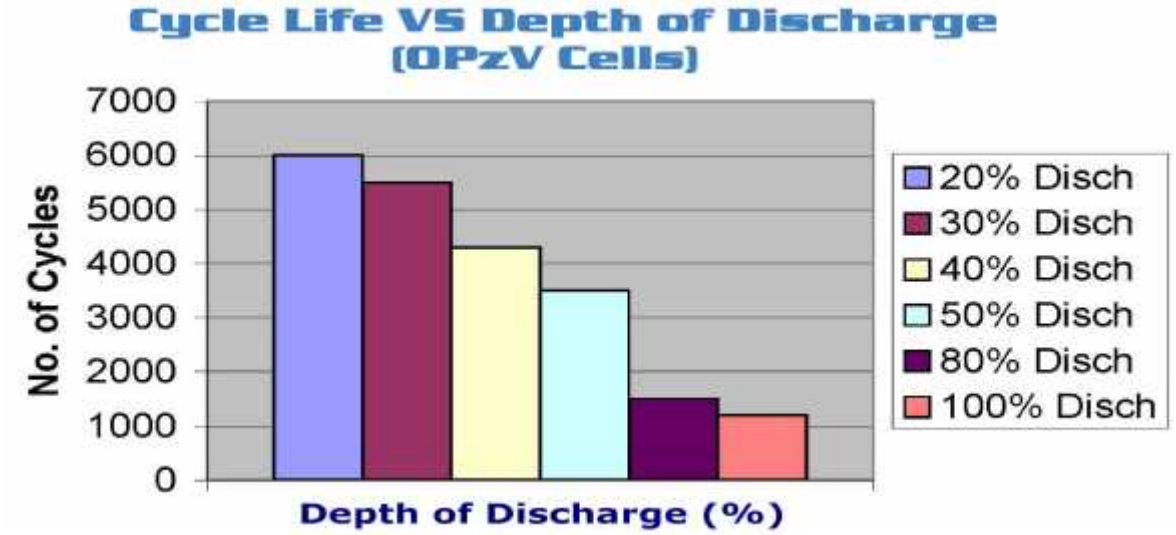
tel : 34-916263872
fax : 34-916263870
website : www.interberg.com
e-mail : info@interberg.com

atlantic power group

interberg batteries







interberg batteries
mirador de despeñaperros 17
28400 collado villalba (madrid)
Spain

tel : 34-916263872
fax : 34-916263870
website : www.interberg.com
e-mail : info@interberg.com

atlantic power group

interberg batteries

Interberg Batteries Ltd.
Mirador de Despeñaperros 17
28400 Collado Villalba (Madrid)
Spain
tel: 34-91-6263872
fax: 34-91-6263870
e-mail: info@interberg.com
website: www.interberg.com

atlantic power group

TÜV InterCert
ISO 9001:2008 - ISO 14001:04 - OHSAS 18001:07
Certificate No. 09-QEO-01427-TIC

an ATLANTIC POWER GROUP company

Mexico - Sao Paulo - Madrid - Istanbul - Kuwait - Hong Kong - Melbourne